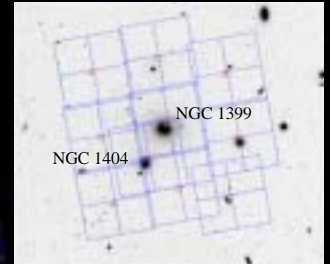


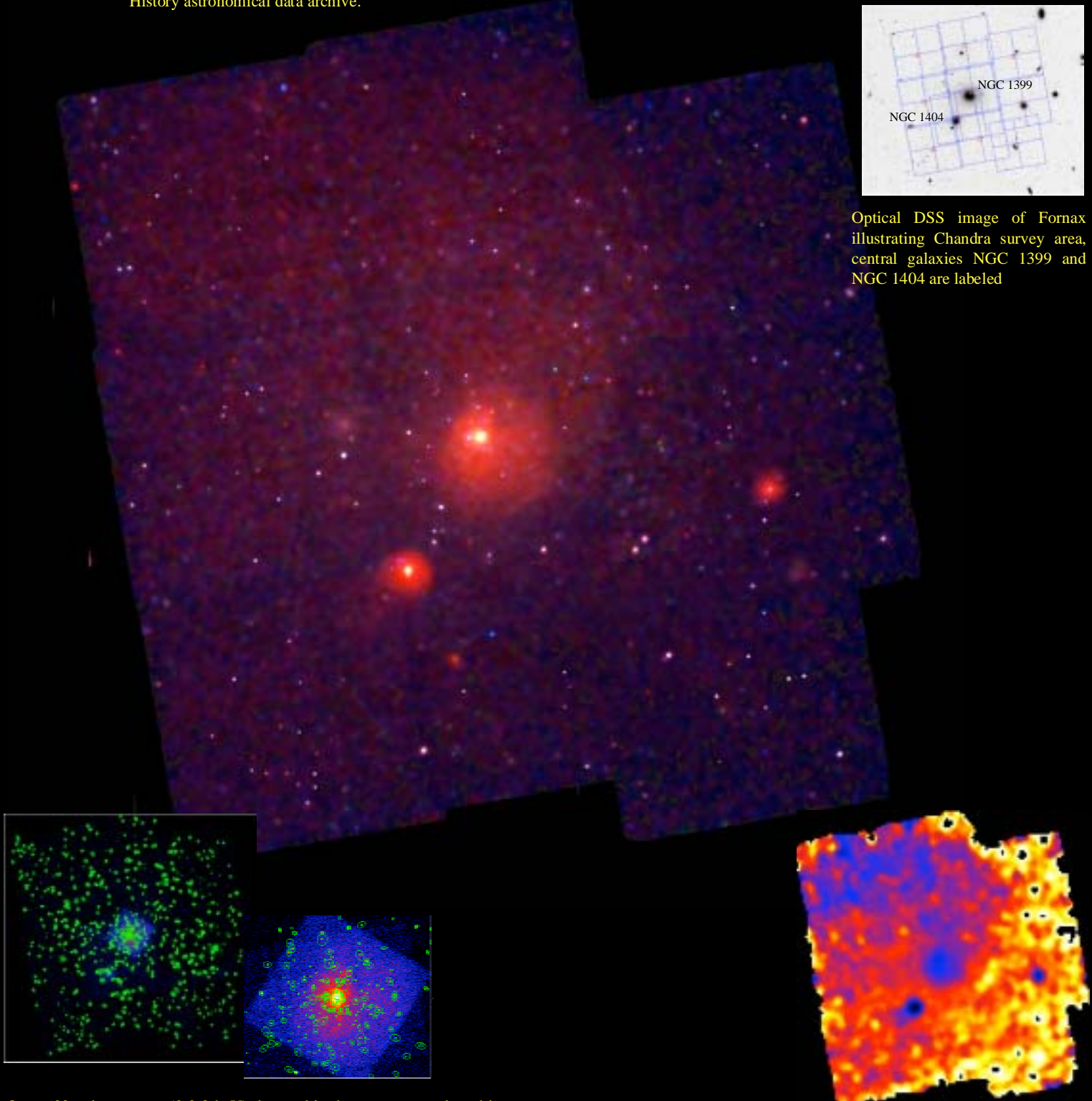
The Chandra Fornax Survey

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With a mean intra-cluster gas temperature of 1.2 keV Fornax is representative of the critical boundary between massive clusters and groups. We have obtained a mosaic of ten 50 ksec ACIS-I pointings mapping the inner 1 degree of Fornax. At a distance of only 20Mpc structure as small as 100 pc is resolved by Chandra, allowing us to investigate both the detailed hydrodynamical state of gas and emission from known populations of dwarf galaxies, globular clusters and intra-cluster stars. A complex, multi-temperature intra-cluster medium is seen, together with over 600 point sources. Shown below is an exposure corrected, adaptively smoothed, "3-color" image of the total dataset. Full images, exposure, temperature, abundance, and point source maps will be made available starting Dec 2003 from the American Museum of Natural History astronomical data archive.



Optical DSS image of Fornax illustrating Chandra survey area, central galaxies NGC 1399 and NGC 1404 are labeled



Over 600 point sources (0.3-8 keV) detected in the survey are plotted in green over the unsmoothed event image - which includes archival ACIS-S data on NGC 1399 for a total exposure time of 150 ksec in the core. Insert is close-up of NGC 1399 - over 70% of these point sources are associated with known globular clusters surrounding this central galaxy.

Gas temperature map - blue is cool (<1.4 keV), red/yellow hotter. NGC 1404 is clearly seen as a cold dense blob with a cometary morphology consistent with infall towards NGC 1399. More remarkable is the overall plume-like low-temperature structure to the North and East of NGC 1399.